ANALYZING TRAFFIC BEHAVIOR AND TREATMENTS IN NGN IP CORE NETWORKS

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Abstract

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Today Internet Protocol has taken over the entire communication. With the advancements in the new technologies cost of the IP related equipments has come down which has helped this exponential growth. with the increase of the usage the telecommunication service providers are expanding their infrastructure to cater the growth. Entire world is expanding their infrastructure mainly on IP equipments.

Integrating the legacy infrastructure to the IP Network has lot of challenges. The real challenges are the transporting delay sensitive traffic like voice over the IP Network, IP node failures, IP link failure detections, delay variations. There are proprietary systems being developed between the IP vendors and the others in order to over come these challenges which can sometime be not flexible to the telecom service provider. In this research an open standard based approach is used to integrate media gateways to an IP/MPLS Network. The challenges of the integration are discussed in this thesis.

A lab setup and a live network test were performed in order to measure the quality of the integration work. The interconnection methods were analyzed after going through the theories related to the media gateways and IP/MPLS technologies. Also since there. can be different type of traffic in an IP/MPLS network a traffic treatment method should also be developed

The major results of the research was that using open standards methods the Essential parameters for the Media gateway integration of the IP core networks can be achieved. Also the model that was developed for the traffic treatments was successful.

Media gateways interconnections with IP. networks are successful on open standards IP protocols. Fast convergence requirements, QoS requirements and jitter and delay requirements can be addressed using open standards IP protocols.